

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

**Los Angeles County, California  
Multi – Agency  
Swift Water Rescue Committee**

**Operational Standards & Guidelines  
Document**

**December 10, 1999**



**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

**LOS ANGELES COUNTY MULTI-AGENCY  
SWIFTWATER RESCUE COMMITTEE**

**OPERATIONAL STANDARDS AND GUIDELINES**

**SUMMARY**

The County of Los Angeles Multi-Agency Swift Water Rescue Committee is a multi-agency partnership working to create a County-wide integrated swiftwater rescue response system. Established in 1992 at the direction of the Los Angeles County Board of Supervisors, the Committee was formed with participating agencies including the City of Los Angeles Fire Department, County of Los Angeles Fire Department, Sheriff's Department, Lifeguards and Department of Public Works. The Committee was expanded in 1996 to include representatives from the County's Disaster Management Operational Areas (Areas A through G).

For the past three years the Committee has endeavored to organize and produce a document that affords all participating agencies with standards of training, identified levels of expertise for rescuers, tested and accepted equipment, helicopter training, typing and equipment, multi-agency communications and water rescue pre-deployment coordination.

The following "Operational Standards & Guidelines" document was developed from the perspective that many water rescues would be dynamic responses and would require resources from a variety of agencies while the incident moves from jurisdiction to jurisdiction. Coordination among Fire, Law Enforcement, Public Works and Lifeguards is of the highest importance. Communication between agencies, ground personnel and airborne assets requires preplanning to be successful.

The contents of this document are not intended to dictate policy or procedures to any agency but rather to afford those who choose to participate with water rescues a guide to what this Committee has jointly considered as accepted and tested techniques, standardized equipment and available communications. It is our intent that this document be distributed throughout the safety organizations within the County in a continuing effort to provide quick, safe and reliable responses to swiftwater incidents.

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

**LOS ANGELES COUNTY MULTI-AGENCY  
SWIFTWATER RESCUE COMMITTEE**

**Chairperson** Los Angeles County Fire Department

**Area A** Los Angeles City Fire Department  
Los Angeles City Fire Department Air Operations  
Los Angeles Department of Water & Power  
Culver City Fire Department

**Area B** Los Angeles County Fire Department  
Los Angeles County Fire Department Air Operations  
Los Angeles County Fire Department Lifeguard Division  
West Covina Fire Department

**Area C** Glendale Fire Department  
Glendale Police Department / Air Support Unit  
San Gabriel Fire Department  
Monrovia Fire Department

**Area E** Downey Fire Department  
Montebello Fire Department

**Area F** Long Beach Fire Department  
Long Beach Fire & Marine Safety Division

Los Angeles County Sheriff's Department / Emergency Services Detail  
Los Angeles County Sheriff's Department Air Operations

Los Angeles County Office of Emergency Management

Los Angeles County Department of Public Works

Los Angeles County Department of Parks & Recreation Lake Lifeguard Division

Los Angeles County Office of Education

Nancy Rigg & Karen Langley

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

**Contents**

	<u>Page</u>
<b>I.      <u>Introduction:</u></b>	
1.0     Los Angeles County Multi-Agency Swift Water Rescue Committee	5
1.01    Scope	5
1.02    Definitions	6
<b>II.     <u>Training:</u></b>	
2.00    Training Levels	7
2.01    Training Records	7
2.02    Multi-Agency Training	7
<b>III.    <u>Equipment:</u></b>	
3.00    Water Rescue Helmet Identification	8
3.01    Water Rescue Equipment	8
<b>IV.     <u>Helicopters:</u></b>	
4.00    Typing	9
4.01    Pilots	9
4.02    Training	10
4.03    Equipment	11
<b>V.      <u>Communications:</u></b>	
5.00    Radio	12
5.01    Hand Signals	12
<b>VI.     <u>Water Rescue Pre-Deployment:</u></b>	
6.00    Pre-Deployment Factors	13

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

**Part I.      Introduction:**

**Sec. 1.00     Los Angeles County Multi-Agency Swift Water Rescue Committee:**

- a. Established by direction of the Los Angles County Board of Supervisors in 1992 and expanded in 1996 so that all areas within Los Angles County would work toward improvement and coordination of water rescue response within Los Angeles County.
- b. Chairperson for this committee would be appointed by the Los Angeles County Fire Department Fire Chief, with fire department representatives from each operational area, including representatives from the Sheriff's Department (LASD), Department of Public Works (LACOPW), Parks and Recreation Lifeguards, and Office of Emergency Management (OEM).
- c. Working sub-committees include:
  1. Training & Equipment
  2. Helicopter
  3. Training Site

**Sec. 1.01     Scope:**

- a. The recommendations of this committee apply to all swift water rescue teams within the Los Angeles County Operational Area.
- b. The recommendations of this document will supplement existing standards and regulations relating to water rescue as set forth by federal, state and local agencies such as OSHA, NFPA, and the California State Fire Marshal's Office.
- c. The purpose of this document is to set minimum standards in the areas of training, equipment, communications, and operational coordination for water rescues within the Los Angeles County Operational Area.
- d. The committee will submit recommendations to the Los Angles County Operational Area Coordinator Fire Chiefs through the Los Angeles County Fire Department Fire Chief.

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

Sec. 1.02

**Definitions:**

- a. **Water Rescue Awareness**: basic classroom instruction in water rescue response.
- b. **Water Rescue First Responder Operational**: (classroom and field) instruction in water rescue response and coordination with hands-on skills and equipment proficiency for land based rescue only (approximately **8 hours**).
- c. **Water Rescue Technician (or equivalent)**: classroom and field instruction in the areas of; river hydrology, in-water fundamentals, land based and contact rescue skills (to be completed in moving water), in addition to instruction in response planning, search operations, boat-assisted and boat based operations, and advanced rope rescue techniques (approximately **48 hours**).
- d. **Water Rescue Specialist**: water rescue technician or equivalent and other water related courses required to maintain water rescue skills and remain educated on current rescue procedures, techniques, and terminologies. Topics include helicopter operations, inflatable rescue boat operations, personal water craft operations, or other advanced water rescue related courses.
- e. **Equivalent level of instruction** would be defined in this document as any water rescue curriculum recognized by the Los Angeles County Multi-Agency Swift Water Rescue Committee.

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

**Part II. Training:**

**Sec. 2.00 Recommended minimum training levels for water rescue technicians and specialists:**

- a. Water Rescue Technician (or equivalent) is the minimum level of functional capability for safety and effectively conducting in-water operations at swift water rescue incidents. See definition of Water Rescue Technician on previous page.
- b. Water Rescue Specialist (established based on agency resources and needs). Water Rescue Technicians with additional training in helicopter operations, inflatable rescue boat operations, personal watercraft operations, vertical wall, or other advanced water rescue related courses.
- c. Must complete a minimum of eight (8) hours of land based and in-water contact training continuing education annually.
- d. Complete a swim proficiency assessment approved by each agency or jurisdiction having authority, on an annual basis.
- e. In addition to the above, personnel shall meet or exceed the water rescue training requirements as set forth by NFPA, FIRESCOPE and the State Office of Emergency Services.

**Sec. 2.01 Training Records:**

- a. It is the responsibility of each agency to maintain all water rescue related training records.

**Sec. 2.02 Multi Agency Training:**

- a. This committee will conduct an annual multi-agency water rescue exercise to enhance interagency water rescue response and coordination.

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

**Part III      Equipment:**

**Sec 3.00      Water Rescue Helmet Identification:**

- a. **Yellow** - shall identify first responder operational trained personnel.
- b. **White** - shall identify a water rescue technician.

**Sec 3.01      Water Rescue Equipment:**

- a. Water rescue equipment inventories shall meet or exceed the requirements established by FIRESCOPE and the State Office of Emergency Services.

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

**Part IV      Helicopters:**

Sec. 4.00      **Typing:** Helicopters will be identified by type as defined within the FIRESCOPE Field Operations Guide (FOG).

a.      **Type 1 - Heavy:**

Gross Weight - 12,500 pounds or more

Seats 16

External Load Capable - Hoist or Cargo Hook

Examples: UH60 Black Hawk, J Hawk, Chinook

b.      **Type 2 - Medium:**

Gross Weight - 6,000 to 12,500 pounds

Seats 10

External Load Capable - Hoist or Cargo Hook

Examples: Bell 205, 212, 412, MD Explorer

c.      **Type 3 - Light:**

Gross Weight - 6,000 pounds or less

Seats 5

External Load Capable - Cargo Hook with Short Haul System

Examples: Bell 206, 407, MD 500E, 520N, 600N

d.      **Type 4 - Piston:**

Does Not Meet Mission Requirements.

Sec. 4.01      **Pilots:**

a.      Pilots must be USFS, CDF or OAS certified and currently possess an appropriate card or be a Public Service Operator who meets the criteria of their respective Department's requirements for total time, time and type, external load operations and currency.

b.      Pilot capabilities must include external load operations in static and dynamic water.

c.      At least one crew member must have a minimum of first responder or water rescue awareness training or an equivalent combination of training and experience.

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

Sec. 4.02

**Training:**

- a. Training for a helicopter water rescue specialist who interacts with water rescue capable helicopters:
  1. Must complete a minimum of (8) eight hours of helicopter contact training continuing education **annually**.
  2. Areas to include; helicopter orientation and safety, hand signals and communications, water rescue device orientation and operations, and any additional individual agency specific requirements, along with those set by the Los Angeles County Multi-Agency Swift Water Rescue Committee, Helicopter Working Sub-Committee.
- b. Training for water rescue air crew who would be interacting with water rescue helicopter specialists:
  1. Must complete a minimum of eight hours of helicopter contact training **annually**.
  2. Areas to include; helicopter orientation and safety, hand signals and communications, water rescue device orientation and operations, and any additional individual agency specific requirements.
- c. It is the responsibility of each agency or jurisdiction to maintain all related training records in accordance with recognized standards.
- d. Equivalent level of instruction would be defined in this document as any water rescue curriculum recognized by the Los Angeles County Multi-Agency Swift Water Rescue Committee, Helicopter Working Sub-Committee.

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

Sec. 4.03      **Equipment:**

- a.      Helicopter Water Rescue Specialist Helmet Identification:
  1.      Helicopter water rescue specialist personnel certified by their agency in helicopter operations will have the top of their helmets marked with a 4-inch tall "H", made of 1 inch wide, blue reflective tape.
- b.      Helicopter Water Rescue Specialist Personal Equipment:
  1.      Water rescue equipment inventories shall meet or exceed the requirements established by FIRESCOPE and the State Office of Emergency Services.
- c.      Specialized helicopter equipment utilized for the purpose of floatation or rescue:
  1.      **Floatation devices such as:** Res-Q-Ring, Floatation Ring, Break-Away Inflatable Floatation Device.
  2.      **Rescue devices such as:** SkyHook Rescue Ball, Cearley Cinch Collar, Res-Q-Ring, Collection Ring, Cearly Straps, Rear Mount Harness Systems, or victim straps.
  3.      Equipment will meet the minimum requirements for industry recognized standards.
  4.      Current NFPA 1983 Standards for Life Loads are to be utilized for such items as rope, harnesses, and carabiners.

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

**Part V Communications:**

Sec. 5.00      **Radio:**

- a. Command and tactical communication - shall be assigned by the jurisdiction having authority.
- b. Interagency coordination / communication - State White 1 (154.280) shall be utilized in the absence of preexisting mutual aid and automatic aid agreements.
- c. Air to air communication - initial on-scene announcement by aircraft shall occur on the guarded frequency 123.025 MHZ. In the absence of preexisting mutual and automatic aid agreements the following frequencies shall be utilized:
  1. Primary: (Los Angeles County Fire Department)      135.975 MHZ
  2. Secondary: (Los Angeles City Fire Department)      119.975 MHZ
- d. Air to ground communication - In the absence of preexisting mutual and automatic aid agreements the following frequencies shall be utilized:
  1. Primary: (L.A. County Fire Department White Tac 3) 154.400 MHZ
  2. Secondary: (State White 1)                                  154.280 MHZ

Sec. 5.01      **Hand Signals:**

1. **"Ok to begin lift (or raise cable)"**  
Head tap - Palm of hand to top of rescuers head in a repetitive up and down motion until lifting begins.
2. **"Return Rescuer to water or surface"**  
Arm straight out to side, closed fist with thumb pointed downward in a repetitive 45 degree angle in a up and down motion until descent begins.
3. **"Hold"**  
Shoulder to elbow horizontal to surface, forearm vertical with clinched fist (held until substituted by another signal).

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

**Part VI      Water Rescue Pre Deployment:**

**Sec. 6.00      Determinations for Pre-deployment:**

- a. Weather information will come from the National Weather Service and the Los Angeles County Department of Public Works in determining levels of activation and pre-deployment for each agency's needs for swift water rescue teams within the Los Angeles County Operational Area.
- b. These storm levels are intended to reflect the amount of expected runoff and potential for flooding, mud and debris flows, and water rescue incidents.

**Level 1 :**      **Storm warnings with an 80% prediction of:**

1" of rain per 24 hours (unsaturated ground), or  
½" of rain per 24 hours (saturated ground).

**Level 2 :**      **Storm warnings with an 80% prediction of:**

1½ " of rain per 24 hours (unsaturated ground), or  
1" of rain per 24 hours (saturated ground).

**Level 3 :**      **Storm warnings with an 80% prediction of:**

Rainfall and saturation exceeding those listed for Level 2.  
Generalized flash floods, urban flooding, and / or mud and debris flows.  
Urban flooding with possible life hazards.

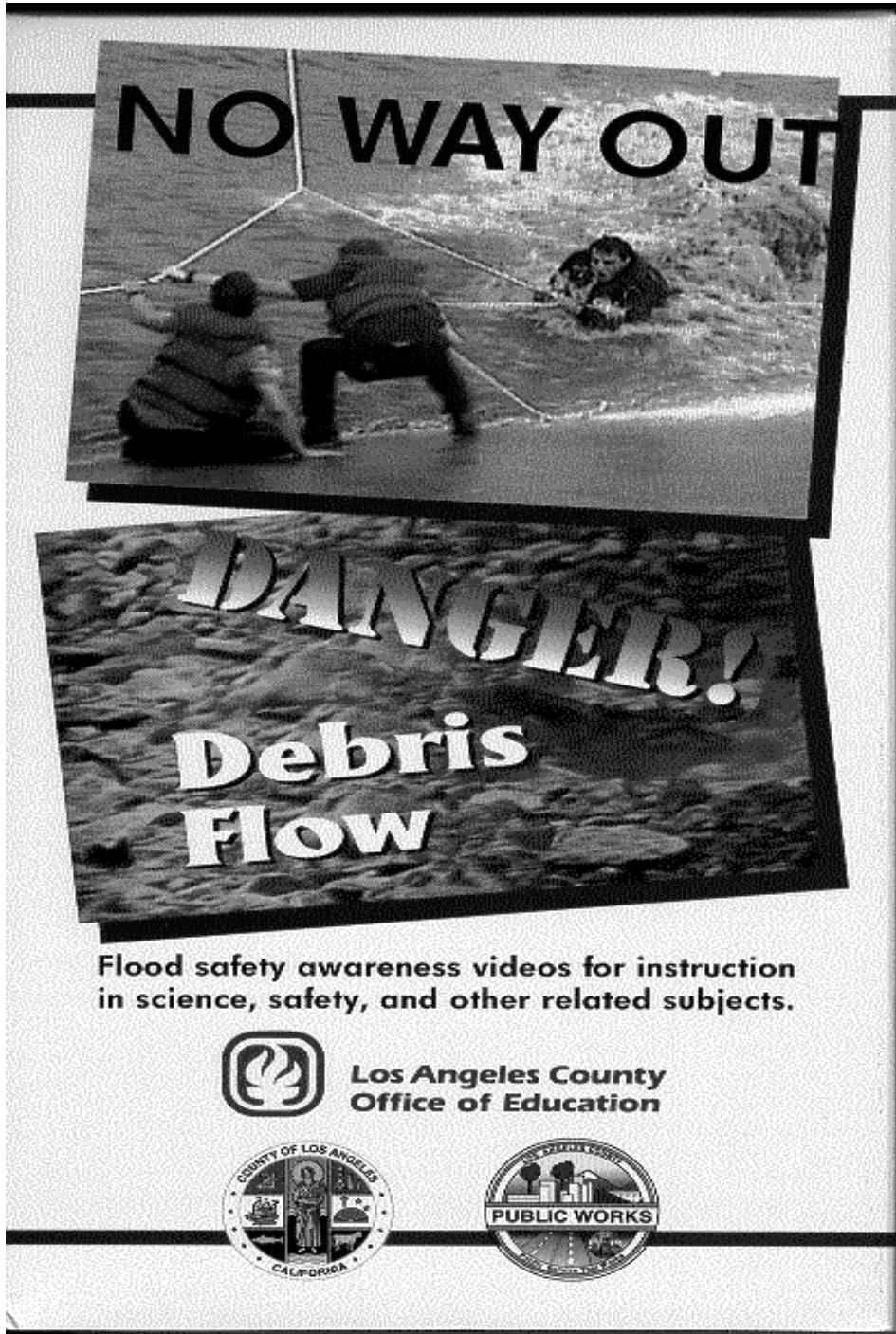
- c. Other factors to be considered when determining deployment levels include:

1. The effect of major wildland and interface burn areas. Large burn areas result in increased runoff and high potential for mud and debris flows and flash floods.
2. Flood Watches and Flood Warnings
3. Real time effects of the storm ( may differ from weather forecasts, resulting in severe conditions in particular geographic areas).
4. Releases in the Flood Control Channels

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**

- d. Levels of activation and pre-deployment resources will be made to all operational area coordination communication centers by the Los Angeles County Fire Department Command & Control Center at 0800 and 1700 hours on operational periods when heavy rain is predicted.
1. Information to be forwarded to the operational area's coordination dispatch center include weather / precipitation tables, mud and debris flow alerts, and water rescue resources matrix for Region 1.
    - A. Water rescue resources that are listed on the Region 1 matrix shall report to Los Angeles County Fire Department Command & Control (Shift Captain) any changes in levels of response as soon as possible.
  2. **Information shall be forwarded to all agencies within the operational area coordinator's span of control.**

**Los Angeles County Multi-Agency Swift Water Rescue Committee**  
**Operational Standards & Guidelines**



Flood safety awareness videos for instruction  
in science, safety, and other related subjects.



**Los Angeles County  
Office of Education**

